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(12) **United States Patent**
Yamada et al.

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(45) **Date of Patent:** Oct. 3, 2006

(54) **INFORMATION PROCESSING UNIT,
DISPLAY METHOD FOR THE
INFORMATION PROCESSING UNIT,
PROGRAM FOR THE SAME, RECORDING
MEDIUM FOR RECORDING THE
PROGRAM THEREIN, AND REPRODUCING
UNIT**

5,701,282 A * 12/1997 Matsumoto et al. 369/30.04
5,832,173 A 11/1998 Terasawa et al. 386/69
2002/0012526 A1 1/2002 Sai et al. 386/69
2002/0101790 A1 * 8/2002 Miyashita et al. 369/30.07
2002/0172107 A1 * 11/2002 Yamada et al. 369/30.26

(75) Inventors: Youichi Yamada, Tokorozawa (JP);
Hiroyuki Isobe, Tokorozawa (JP);
KIMURA Tomohiko **Kumura** Tokorozawa (JP);
Koichiro Sakata, Tokorozawa (JP)

FOREIGN PATENT DOCUMENTS

EP	0 535 732	4/1993
EP	0 844 614	5/1998
EP	1 229 544	8/2002
EP	1 260 987	11/2002

(73) Assignee: Pioneer Corporation, Tokyo (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 181 days.

OTHER PUBLICATIONS

European Search Report dated Oct. 13, 2004.

* cited by examiner

Primary Examiner—Marlon T. Fletcher

Assistant Examiner—Jianchun Qin

(74) Attorney, Agent, or Firm—Armstrong, Kratz, Quintos, Hanson & Brooks, LLP

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(30) **Foreign Application Priority Data**

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(51) **Int. Cl.**
G10H 7/00 (2006.01)

(52) **U.S. Cl.** 84/602; 711/100

(58) **Field of Classification Search** 84/601,
84/602, 604-609; 711/100; 365/203.01;
369/30.7, 30.04, 30.26

See application file for complete search history.

(56) **References Cited**

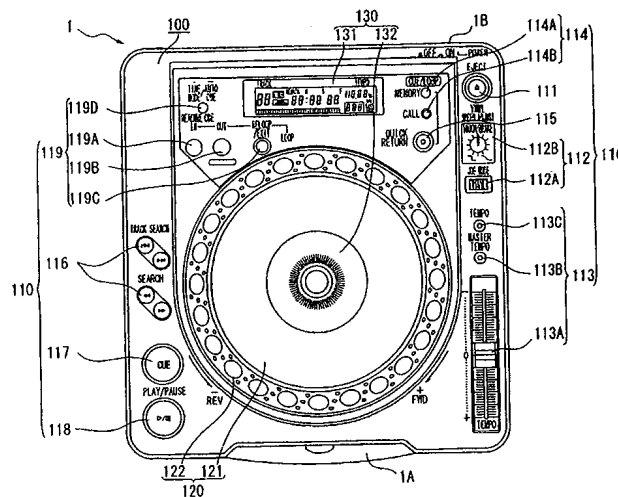
U.S. PATENT DOCUMENTS

4,812,940 A 3/1989 Takenaga 360/137

(57) **ABSTRACT**

A reading section (10) reads information recorded in an optical disk and outputs a read signal. A DSP (20) detects the read signal, and make it reproducible. An operational instruction recognizing section (51) recognizes an instruction for a specified position of the information. Then a display control section (54) makes a cue point position display section of a display section (130) display an instructed position. Because of this feature, the specified instructed position can be recognized easily and accurately.

16 Claims, 7 Drawing Sheets





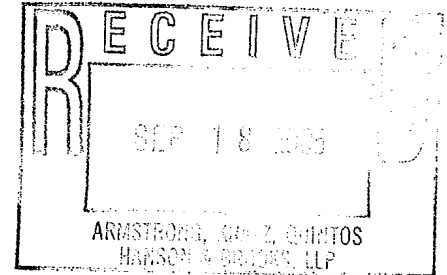
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ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006



ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 181 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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APPLICANT(s) (up to 18 names are included below, see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Youichi Yamada, Tokorozawa-shi, JAPAN;
Hiroyuki Isobe, Tokorozawa-shi, JAPAN;
Tomohiko Kimura, Tokorozawa-shi, JAPAN;
Koichiro Sakata, Tokorozawa-shi, JAPAN;

✓

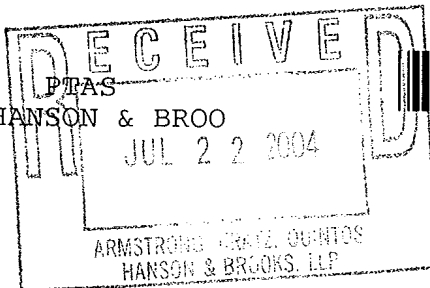
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1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

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BRIEF: CORRECTIVE TO CORRECT THE CITY IN THE ASSIGNEE'S ADDRESS
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ASSIGNOR:

YAMADA, YOUICHI

DOC DATE: 09/05/2003

ASSIGNOR:

ISOBE, HIROYUKI

DOC DATE: 09/05/2003

ASSIGNOR:

KIMURA, TOMOHIKO

DOC DATE: 09/05/2003

ASSIGNOR:

SAKATA, KOICHIRO

DOC DATE: 09/05/2003

ASSIGNEE:

PIONEER CORPORATION
4-1, MEGURO 1-CHOME, MEGURO-KU
TOKYO, 153-8654, JAPANjes
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TITLE: INFORMATION PROCESSING UNIT, DISPLAY METHOD FOR THE INFORMATION
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RECORDING THE PROGRAM THEREIN AND REPRODUCING UNIT

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IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter ASSIGNOR) by
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(Title of Invention)

(hereinafter ASSIGNEE), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled

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(*If the assignment is
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for which application for Letters Patent of the United States was executed on even date herewith unless otherwise indicated below:

filed on August 22, 2003, Serial No. 10/645,850

(Armstrong, Westerman & Hattori, LLP is hereby authorized to insert the series code, serial number and/or filing date hereon, when known)

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IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

(Signatures)

Youichi Yamada

(Signature)

Youichi YAMADA

(Type Name)

5/9/2003

(Date)

Hiroxuki ISOBE

(Signature)

Hiroxuki ISOBE

(Type Name)

5/9/2003

(Date)

Tomohiko KIMURA

(Signature)

Tomohiko KIMURA

(Type Name)

5/9/2003

(Date)

Koichiro SAKATA

(Signature)

Koichiro SAKATA

(Type Name)

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(Date)

(Signature)

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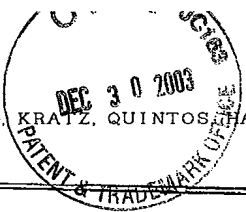
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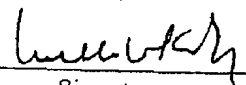
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